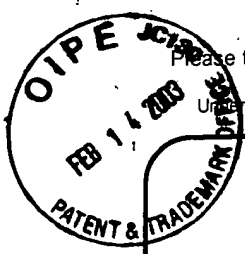


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1646



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PTO/SB/21 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	09/995,225	
	Filing Date	November 26, 2001	
	First Named Inventor	Chen	
	Group Art Unit	1646	
	Examiner Name	Not Yet Assigned	
Total Number of Pages in This Submission	20	Attorney Docket Number	21.US18.CIP(formerly AREN-0308)

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ENCLOSURES (check all that apply)		
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Remarks VIA EXPRESS MAIL LABEL NO.: EV146607355US DATE: FEBRUARY 14, 2003		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Michael P. Straher, Registration No.: 38,325
Signature	
Date	February 14, 2003

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service via Express Mail Label No. EV1466007355US addressed to: Commissioner for Patents, Washington, D.C. 20231 on this date: February 14, 2003			
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In Re Application of: Chen et al.

Confirmation No.: 1454

Serial No.: 09/995,225

Group Art Unit: 1646

118

Filing Date: November 26, 2001

Examiner: Not Yet Assigned

Publication No.: US 2002/0193584-A1

Publication Date: December 19, 2002

For: ENDOGENOUS AND NON-ENDOGENOUS VERSIONS OF HUMAN G PROTEIN-
COUPLED RECEPTORS

Via Express Mail Label No. EV 146607355 US
Date of Deposit: February 14, 2003

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Commissioner for Patents
Washington, DC 20231

REQUEST FOR CORRECTED APPLICATION PUBLICATION

Applicants respectfully request that the following corrections be made to Publication No.:
US 2002/0193584-A1, published on December 19, 2002. Each of the proposed corrections are
necessitated by printing errors made by the PTO. Accordingly, no fee is required.

Printing Errors in Table E

On page 16 of the published application, in Table E, please make the corrections
indicated on the attached marked-up version of page 16. These errors are believed to be material
to understanding the 3' and 5' primer sequences, cycle conditions, and tissue expression location
of the hRUP29 and hRUP31 receptors shown in Table E. Copies of corresponding pages 52 and

53 of the specification as filed (Ser. No. 09/995,225), showing Table E as filed, also have been provided.

Substitution of G_1 for G_i :

Applicants respectfully request correction of the following additional PTO printing errors in the published application.

On page 2 of the published application, in the second line of paragraph [0030], please replace " $G_q(\text{del})/G_1$ " with " $G_q(\text{del})/G_i$ ".

On page 6 of the published application, in the first line of paragraph [0082], please replace " G_1 " with " G_i ".

On page 6 of the published application, in the seventh line of paragraph [0082], please replace " G_1 " with " G_i ".

On page 7 of the published application, in the fifteenth line of paragraph [0090], please replace " G_1 " with " G_i ".

On page 8 of the published application, in the sixth line of paragraph [0094], please replace " G_1 " with " G_i ".

On page 13 of the published application, in the twenty-second line of paragraph [0188], please replace " G_1 " with " G_i ".

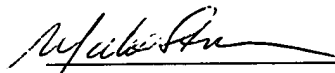
On page 15 of the published application, in the fourth line of paragraph [0202], please replace " $G_q(\text{del})/G_1$ " with " $G_q(\text{del})/G_i$ ".

On page 15 of the published application, in the twelfth line of paragraph [0202], please replace " $G_q(\text{del})/G_1$ " with " $G_q(\text{del})/G_i$ ".

Copies of pages 2, 6, 7, 8, 13 and 15 of the published application, and the corresponding pages of the 09/995,225 application, showing the location of the errors, are also provided.

Respectfully Submitted,

Date: February 14, 2003



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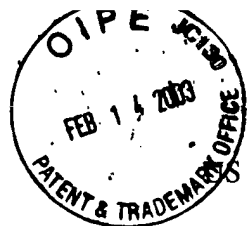


TABLE E

Receptor Identifier	Cycle Conditions Min ('), Sec (") Cycles 2-4 repeated 35 times	5'Primer (SEQ.ID.NO.)	3'Primer (SEQ.ID.NO.)	DNA Fragment	Tissue Expression
hRUP28	94° C. for 5 min; 94° C. for 30 sec; 58° C. for 30 sec; 72° C. for 1 min, and 72° C. for 7 min	GTCCTCACT GGTGGCCAT GTACTCC (52)	CTGCGTCCAC CAGAGTCAC GTCTCC (53)	710 bp	heart; kidney; liver; lung and pancreas
hRUP29	94° C. for 5 min; CTTPGGATGTT 94° C. for 30 sec; 58° C. for 30 sec; 72° C. for 1 min, and 72° C. for 7 min	GTTTGTGGCT TGGGCTGCC CTTPCTGC (54)	690 bp AACGGCACA AAACACAAT TCC (55)	leuko- cyte and ovary	
hRUP30	94° C. for 2 min; 94° C. for 15 sec; 58° C. for 20 sec; 72° C. for 1 min, (56) and 72° C. for 10 min	CTGCTCACG GTTGACCGC TACACTGC (56)	GTGGCCATG AGCCACCCT GAGCTCC (57)	690 bp	pancreas
hRUP31	95° C. for 4 min; 95° C. for 1 min; 52° C. for 30 sec; (58) 72° C. for 1 min, and 72° C. for 7 min	CTTCTTCTCC GACGTCAG ATCG (59)	CCAATCA GTGTGCAA	516 bp	colon, lung, pancreas, thymus; cerebral cortex, hippocampus of brain, and fat cells
hRUP32	95° C. for 4 min; 95° C. for 1 min; 52° C. for 30 sec, AA (60) 72° C. for 1 min, and 72° C. for 7 min	TGAATGGGT CCTGTGTGA AA (60)	CAACGGTCT GACAACCTC CT (61)	527 bp	thymus
hRUP34	95° C. for 4 min; 95° C. for 1 min; 52° C. for 30 sec, G (62) 72° C. for 1 min, and 72° C. for 7 min	TTGCTGTGAT GTGGCATTTC G (62)	CAGGAAGCC CATAAAGGC ATCAA (63)	534 bp	peripheral blood leukocyte ("PBL"), prostate and kidney
hRUP35	95° C. for 4 min; 95° C. for 1 min; 52° C. for 30 sec, CC (64) 72° C. for 1 min, and 72° C. for 7 min	ACATCACCT GCTTCCTGA CC (64)	CCAGCATCTT GATGCAGTG T (65)	557 bp	thalamus
hRUP37	95° C. for 4 min; 95° C. for 1 min; 52° C. for 30 sec, GTC (66) 72° C. for 1 min, and 72° C. for 7 min	CCATCTCCA AAATCCTCA GTC (66)	GCTGTTAAG AGCGGACAG GAAA (67)	517 bp	testis, cerebral cortex and hippocampus

[0214] Diseases and disorders related to receptors located in these tissues or regions include, but are not limited to, cardiac disorders and diseases (e.g. thrombosis, myocardial infarction; atherosclerosis; cardiomyopathies); kidney disease/disorders (e.g., renal failure; renal tubular acidosis; renal glycosuria; nephrogenic diabetes insipidus; cystinuria; polycystic kidney disease); eosinophilia; leukocytosis; leukopenia; ovarian cancer; sexual dysfunction; polycystic ovarian syndrome; pancreatitis and pancreatic cancer; irritable bowel syndrome; colon cancer; Crohn's disease; ulcerative colitis; diverticulitis; Chronic Obstructive Pulmonary Disease (COPD); Cystic Fibrosis; pneumonia; pulmonary

hypertension; tuberculosis and lung cancer; Parkinson's disease; movement disorders and ataxias; learning and memory disorders; eating disorders (e.g., anorexia; bulimia, etc.); obesity; cancers; thymoma; myasthenia gravis; circulatory disorders; prostate cancer; prostatitis; kidney disease/disorders (e.g., renal failure; renal tubular acidosis; renal glycosuria; nephrogenic diabetes insipidus; cystinuria; polycystic kidney disease); sensorimotor processing and arousal disorders; obsessive-compulsive disorders; testicular cancer; priapism; prostatitis; hernia; endocrine disorders; sexual dysfunction; allergies; depression; psychotic disorders; migraine; reflux; schizophrenia; ulcers; bronchospasm; epi-

lists the receptors, the cycle conditions and the primers utilized, and also lists exemplary diseases/disorders linked to the receptors.

TABLE E

Receptor Identifier	Cycle Conditions Min ('), Sec (") Cycles 2-4 repeated 35 times	5' Primer (SEQ.ID.NO.)	3' Primer (SEQ.ID.NO.)	DNA Fragment	Tissue Expression
hRUP28	94°C for 5 min; 94°C for 30 sec; 58°C for 30 sec, 72°C for 1 min, and 72°C for 7 min	GTCCTCACT GGTGGCCAT GTACTCC (52)	CTGCGTCCAC CAGAGTCAC GTCTCC (53)	710bp	heart; kidney; liver; lung and pancreas
hRUP29	94°C for 5 min; 94°C for 30 sec; 58°C for 30 sec, 72°C for 1 min, and 72°C for 7 min	CTTGATGTT TGGGCTGCC CTTCTGC (54)	GTTTGTGGCT AACGGCACA AAACACAAT TCC (55)	690bp	leukocyte and ovary
hRUP30	94°C for 2 min; 94°C for 15 sec; 58°C for 20 sec, 72°C for 1 min, and 72°C for 10 min	CTGCTCACG GTTGACCGC TAACTGC (56)	GTGGCCATG AGCCACCCT GAGCTCC (57)	690bp	pancreas
hRUP31	95°C for 4 min; 95°C for 1 min; 52°C for 30 sec, 72°C for 1 min, and 72°C for 7 min	CTTCTTCTCC GACGTCAAG G (58)	CCAAATCA GTGTGCAA ATCG (59)	516bp	colon, lung, pancreas, thymus; cerebral cortex, hippocampus of brain, and fat cells
hRUP32	95°C for 4 min; 95°C for 1 min; 52°C for 30 sec, 72°C for 1 min, and 72°C for 7 min	TGAATGGGT CCTGTGTGA AA (60)	CAACGGTCT GACAACCTC CT (61)	527bp	thymus
hRUP34	95°C for 4 min; 95°C for 1 min; 52°C for 30 sec, 72°C for 1 min, and 72°C for 7 min	TTGCTGTGAT GTGGCATT G (62)	CAGGAAGCC CATAAAGGC ATCAA (63)	534bp	peripheral blood leukocyte ("PBL"), prostate and kidney
hRUP35	95°C for 4 min; 95°C for 1 min; 52°C for 30 sec, 72°C for 1 min, and 72°C for 7 min	ACATCACCT GCTTCCTGA CC (64)	CCAGCATCTT GATGCAGTG T (65)	557bp	thalamus

hRUP37	95°C for 4 min; 95°C for 1 min; 52°C for 30 sec, 72°C for 1 min, and 72°C for 7 min	CCATCTCCA AAATCCTCA GTC (66)	GCTGTTAAG AGCGGACAG GAAA (67)	517bp	testis, cerebral cortex and hippocampus
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Diseases and disorders related to receptors located in these tissues or regions include, but are not limited to, cardiac disorders and diseases (e.g. thrombosis, myocardial infarction; atherosclerosis; cardiomyopathies); kidney disease/disorders (e.g., renal failure; renal tubular acidosis; renal glycosuria; nephrogenic diabetes insipidus; cystinuria; polycystic kidney disease); eosinophilia; leukocytosis; leukopenia; ovarian cancer; sexual dysfunction; polycystic ovarian syndrome; pancreatitis and pancreatic cancer; irritable bowel syndrome; colon cancer; Crohn's disease; ulcerative colitis; diverticulitis; Chronic Obstructive Pulmonary Disease (COPD); Cystic Fibrosis; pneumonia; pulmonary hypertension; tuberculosis and lung cancer; Parkinson's disease; movement disorders and ataxias; learning and memory disorders; eating disorders (e.g., anorexia; bulimia, etc.); obesity; cancers; thymoma; myasthenia gravis; circulatory disorders; prostate cancer; prostatitis; kidney disease/disorders(e.g., renal failure; renal tubular acidosis; renal glycosuria; nephrogenic diabetes insipidus; cystinuria; polycystic kidney disease); sensorimotor processing and arousal disorders; obsessive-compulsive disorders; testicular cancer; priapism; prostatitis; hernia; endocrine disorders; sexual dysfunction; allergies; depression; psychotic disorders; migraine; reflux; schizophrenia; ulcers; bronchospasm; epilepsy; prostatic hypertrophy; anxiety; rhinitis; angina; and glaucoma. Accordingly, the methods of the present invention may also be useful in the diagnosis and/or treatment of these and other diseases and disorders.

Example 7

Protocol: Direct Identification of Inverse Agonists and Agonists

A. [³⁵S]GTPγS Assay